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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/465,980	12/16/1999	BARTLEY H. CALDER	SUN1P502	9641
22434	7590	06/05/2006	EXAMINER	
BEYER WEAVER & THOMAS LLP P.O. BOX 70250 OAKLAND, CA 94612-0250			VO, LILIAN	
			ART UNIT	PAPER NUMBER
			2195	

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/465,980

Applicant(s)

CALDER ET AL.

Examiner

Lilian Vo

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 34, 36, 37 and 39 - 48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 34, 36, 37 and 39 - 48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1 – 34, 36, 37 and 39 - 48 are pending. Claims 35 and 38 have been cancelled.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/3/06 has been entered.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 – 34, 36, 37 and 39 - 48 are rejected under 35 U.S.C. 102(e) as being anticipated by “Java TV API Specification”, Sun Microsystems, Inc., June 1, 1999 (hereinafter Sun).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

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CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

5. Claims 1 – 30, 34, 36 – 37, 39 – 41 and 43 – 48 are rejected under 35 U.S.C. 102(e) as being anticipated by Judge et al. (US 6,430,570, hereinafter Judge).

6. Regarding **claim 1**, Sun discloses a computer program product for managing execution of an application on a computer according to a lifecycle, the computer program product comprising a computer readable medium storing thereon computer-readable instructions being executed on a computer, the computer-readable instructions including:

instructions for receiving a state change request from the application, the state change request indicating a request from an application manager initiate a change in state of the application from a first state to a second state (page 37, paragraphs 11 – 13, page 38, paragraphs 3 – 6 and 9 – 10); and

instructions for initiating the state change of the application in response to the state change request received from the application when the second state is an allowable state according to a specified set of rules, thereby enabling the application to initiate its own state change via the state change request without human intervention (page 38: paragraphs 5, 6, 9, 10, page 40: paragraphs 2 and 5, page 41: paragraphs 10, 11, 16, 17, page 43: paragraph 17).

7. Regarding **claim 2**, Sun discloses that the second state is a paused state or destroyed state (page 39: paragraphs 3 – 6 and 9 – 11).

8. Regarding **claim 3**, Sun discloses a method of managing execution of an application according to a lifecycle, comprising:

receiving a signal indicating that a new service is selected (page 40: paragraphs 1 - 2);

initiating execution of the application when the new service is selected such that the application enters an active state (page 40: paragraphs 3 - 5);

pausing execution of the application such that the application enters a paused state from the active state (page 39, paragraphs 5 - 6 and page 40: paragraph 6);

receiving a resume request from the application that has been paused indicating that the application wishes to resume execution and enter the active state from the paused state (page 39: paragraphs 7 - 8); and

starting execution of the application from which the resume request was received such that the application enters the active state from the paused state when the resume request is received from the application, thereby enabling the application to initiate its own state change via the state change request without human intervention (page 39: paragraphs 7 - 8, page 41: paragraphs 10, 11, 16, page 43: paragraph 17).

9. Regarding **claim 4**, Sun discloses a method of managing execution of an application according to a lifecycle, comprising:

initiating execution of each one of the plurality of applications such that the plurality of applications enter an active state (page 38: paragraphs 7, 8, 10, page 39: paragraphs 1 - 8, page 41: paragraph 16);

pausing execution of one of the applications such that the application enters a paused state from the active state (page 38: paragraphs 7, 8, 10, page 39: paragraphs 1 – 8, page 41: paragraph 16);

receiving a resume request from the one of the applications that has been paused, the resume request indicating that the application request to resume execution and enter the active state from the paused state (page 38: paragraphs 7, 8, 10, page 39: paragraphs 1 – 8, page 41: paragraph 16); and

starting execution of the application from which the resume request was received such that the application enters the active state from the paused state in response to receiving the resume request from the application, thereby enabling the application to initiate its own state change from paused state to active state without human intervention (page 38: paragraphs 7, 8, 10, page 39: paragraphs 1 – 8, page 41: paragraph 16).

10. Regarding **claim 5**, Sun discloses a method of managing execution of an application according to a lifecycle, comprising:

requesting a first time that the application changes its state from a first state to a second state by sending a request to the application, wherein the request is a conditional request that is conditional upon the application's decision to change from the first state to the second state, thereby enabling the application to allow or prevent its own state change from the first state to the second state in response to the conditional request (page 38: paragraphs 5 – 10, page 41: paragraphs 8 – 9, 10, 11, 16);

determining whether the application has decided to allow its own state change from the first state to the second state in response to the conditional request by ascertaining whether the

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application has changed its state from the first state to the second state (page 38: paragraphs 5 – 10, page 41: paragraphs 8 – 9, 10, 11, 16, 17); and

instructions for requesting a second time that the application change its change its state from the first state to the second state (page 37: paragraphs 13, page 38: paragraphs 3 - 10 ); and

requesting a second time that the application change its state from the first state to the second state when it is determined that the application has not changed its state from the first state to the second state and a predetermined condition is satisfied (page 37: paragraphs 13, page 38: paragraphs 3 - 10).

11. Regarding **claim 6**, Sun discloses the predetermined condition indicates that specified period of time has elapsed or that the application is now able to perform the request state change (page 41: paragraphs 10, 11, page 43: paragraphs 17).

12. Regarding **claim 7**, Sun discloses wherein it is determined that the application has not changed its state when a state change exception is raised by the application (page 41, paragraph 16 - page 42: paragraph 1).

13. Regarding **claim 8**, Sun discloses wherein it is determined that the application has not changed its state when the application rejects the requested state change (page 41: paragraphs 10, 11, 16 and 17).

14. Regarding **claim 9**, Sun discloses wherein it is determined that the application has not changed its state when the application is unable to perform requested state change (page 41: paragraphs 16 and 17).

15. **Claim 10** is rejected on the same ground as stated in claim 5 above.

16. Regarding **claim 11**, Sun discloses the active state, the destroyed state and the paused state (page 39; paragraphs 1 – 11 and page 40).

17. **Claims 12 – 20** are rejected on the same ground as stated in claims 7 - 11 above.

18. Regarding **claim 21**, Sun discloses a system for managing execution of an application according to an application lifecycle, the system comprising:

a processor (page 37: paragraph 11, page 38, paragraphs 3 - 4);

one or more rules (page 41: paragraphs 5 - 13);

an application manager capable of executing one or more applications according to an application lifecycle enabling each of the applications to enter one of a plurality of states in response to one or more associated predetermined commands, the application manager capable of selecting one of the predetermined commands to execute according to the one or more rules (page 37: paragraphs 11 and page 38: paragraph 10); and

a mechanism for enabling the application to at least initiate and prevent its own state change from a first one of the plurality of states to a second one of the plurality of states (page 38: paragraphs 5, 6, 9 and 10).



19. Regarding **claim 22**, Sun discloses the system as recited in claim 21, further comprising:  
a signaling monitor coupled to the application manager and capable of receiving a data stream, the signal monitor adapted for determining whether an application is present in the data stream and communicating information associated with the application to the application manager (page 37: paragraphs 11 – 13, page 38: paragraphs 3 –6 , page 44: paragraphs 1 - 11).

20. Regarding **claim 23**, Sun discloses the system as recited in claim 21, wherein the application manager is configured to store an application context for each of the applications, the application context identifying a current one of the plurality of states (page 40: paragraphs 3 – 4, page 43: paragraphs 5 – 9 and page 44: paragraphs 1 - 16).

21. Regarding **claim 24**, Sun discloses the system as recited in claim 23, wherein the current one of the plurality of states is identified by the associated application to the application manager (page 38: paragraphs 5, 6, 9 and 10).

22. Regarding **claim 25**, Sun discloses the system as recited in claim 23, wherein the application context further identifies a class loader capable of loading one or more classes associated with the application (page 39: paragraphs 1 – 4).

23. Regarding **claim 26**, Sun discloses the system as recited in claim 23, wherein the application context further identifies a display context including display information to be displayed (page 43: paragraphs 6 - 19).

24. Regarding **claim 27**, Sun discloses the system as recited in claim 21, further comprising an application environment object enabling the associated application to communicate with the application manager, thereby enabling the application to at least initiate its own state change, and inform the application manager that it is preventing its own change state change that has been requested by the application manager (page 41: paragraphs 8 – 11, 15 – page 42: paragraph 1).

25. Regarding **claim 28**, Sun discloses the system as recited in claim 23, wherein the application context further identifies an application environment object that enables the associated application to retrieve properties associated with its runtime environment (page 43: paragraphs 1 – 4 and 9 - 18).

26. Regarding **claim 29**, Sun discloses the system as recited in claim 21, further comprising an application environment object that enables the associated application to communicate a state change to one of the plurality of states to the application manager, wherein the state change has been initiated by the application (page 43: paragraphs 9 - 18).

27. Regarding **claim 30**, Sun discloses the system as recited in claim 21, further comprising an application environment object that enables the associated application to request that the application manager change the current state of the application from a paused state to an active state, thereby enabling the application to initiate its own state change from paused to the active state (page 43: paragraphs 9 - 18).

28. Regarding **claim 31**, Sun discloses that a display manager coupled to the application manager and adapted for managing a display context for each of the applications, the display context being in a first state when the display context is visible and being in a second state when the display context is invisible (page 43: paragraphs 6 – 18).

29. Regarding **claim 32**, Sun discloses that display context is in the first state when the application is in an active state and in the second state when the application is in a paused state (page 43: paragraphs 6 - 18).

30. Regarding **claim 33**, Sun discloses that the state display context is determined according to the one or more rules followed by the application manager (page 40: paragraphs 3 - 7).

31. Regarding **claim 34**, Sun discloses a digital television receiver for managing execution of an application according to a life cycle, comprising:

means for determining from a data stream whether an application is present in the data stream (page 34: paragraphs 1 - 21);

means for loading an application when it is determined that an application is present in the data stream (page 34: paragraphs 1 - 21);

means for executing the loaded application according to the lifecycle, the lifecycle including a plurality of states (page 34: paragraphs 1 - 21);

means for enabling the application manager to cause the application to change from one of the plurality of states to another one of the plurality of states (page 34: paragraphs 1 - 21); and

means for enabling the application to prevent a change in state of the application requested by the application manager or to communicate to the application manager a state change the application from one of a first set of the plurality of states to one of a second of the plurality of states, wherein the state change of the application is initiated by the application (page 34: paragraphs 1 – 21, page 41: paragraphs 8 – 11, 15 – page 43: paragraph 1, page 43: paragraph 9 - 18).

32. **Claims 36 – 37 and 39 - 41** are rejected on the same ground as stated in claims 7 – 9 and 11 above.

33. Regarding **claim 42**, Sun discloses means for enabling the application to raise a state change exception indicating that the application does not want to change its state as the application manager has requested (page 41: paragraph 16 – page 42: paragraph 1).

34. Regarding **claim 43**, Sun discloses means for releasing memory associated with the application when the application has been terminated (page 43: paragraphs 18 – 19, page 42: paragraph 2, page 40: paragraph 7).

35. Regarding **claim 44**, Sun discloses the  
means for creating a class loader associated with each application such that a class loader is associated with the application, the class loader being adapted for loading one or more classes associated with the application (page 39: paragraphs 1 - 4);

means for employing the class loader to load the classes associated with the application (page 39: paragraphs 1 - 4); and

means for instantiating the application using the classes that have been loaded by the class loader (page 39: paragraphs 1, 2 and page 40: paragraph 3).

36. Regarding **claim 45**, Sun discloses means for unloading the classes associated with the application when the application is terminated (page 40: paragraphs 6, 7 and page 39: paragraphs 9 - 11).

37. Regarding **claim 46**, Sun discloses means for de-reference the class loader (page 42: paragraph 4).

38. **Claim 47** is rejected on the same ground as stated in claim 11 above.

39. Regarding **claim 48**, Sun discloses the request includes a parameter, the parameter when in a one state indicating that the state change is conditional and unconditional when in the other state (page 38: paragraphs 5, 6, page 41: paragraphs 8 - 11 and 16, page 43: paragraph 9).

#### ***Response to Arguments***

40. Applicant's arguments with respect to claims 1- 34 and 36 - 48 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

41. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The examiner can normally be reached on Thursday 8am - 5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist at 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lilian Vo  
Examiner  
Art Unit 2195

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May 25, 2006

  
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